Our original CU-JOINER is a flexible lead wire which can be inserted and pulled out with a touch of a socket-type connector. The CU-JOINER is constructed so that only one side of the terminals for connector mounting is exposed and can connect to the contacts of any commercially available socket type connector. Three types are available.

<table>
<thead>
<tr>
<th>Selection item</th>
<th>Pitch (mm)</th>
<th>Shield</th>
<th>Halogen-free</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.5</td>
<td>1.0</td>
<td>1.25</td>
</tr>
<tr>
<td>Type F (supporting tape at both ends, on the same face)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type G (supporting tape at both ends, on opposite faces)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type H (supporting tape at one end)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.2896</td>
<td>80°C, 30V</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.20624</td>
<td>80°C, 60V</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.21147</td>
<td>80°C, 60V</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.20861</td>
<td>105°C, 60V</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.20890</td>
<td>105°C, 90V</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>UL Style No.2643</td>
<td>105°C, 300V</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Conductor thickness</td>
<td>35μm</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>50μm</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>100μm</td>
<td>—</td>
<td>○</td>
</tr>
</tbody>
</table>

Reference page: p4~5, p6~7, p8, p9, p10, p11~12

<table>
<thead>
<tr>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting costs can be reduced. Since both ends of the terminals are machined, terminal machining preprocessing can be eliminated.</td>
</tr>
<tr>
<td>Excellent flexibility. The flat copper conductor makes the CU-JOINER flexible.</td>
</tr>
<tr>
<td>Connector can be inserted to one end and soldered on the other end.</td>
</tr>
<tr>
<td>Easy to insert and pull out.</td>
</tr>
<tr>
<td>High wiring density and saves mounting space.</td>
</tr>
<tr>
<td>Custom design available to match the mounting method. Type, number of wires, pitch between wires, terminal length, insulation length.</td>
</tr>
<tr>
<td>Suitable for a wide range of applications.</td>
</tr>
<tr>
<td>UL approved Six types, including UL approved.</td>
</tr>
</tbody>
</table>

* The drawing shows the straight type connector. There is also an angle type.
CU-Joiner (FFC)

CU-Joiner 0.5mm

Features

● For high density wiring, minimizes dimension.
● Easy insertion to connector can reduce processing cost.
● Can be used as replacement FPC with lower cost.

Application

- Electronic equipment
- Flat panel display
- Automotive equipment
- Optical pick-up
- Personal computer
- GAME

- Standard UL 758
- Hitachi specification SP23-90979

Whisker controlled (Modified II)

RoHS compliance

Construction & specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>NWFCUJ (0.5)</th>
<th>NWSCUJ (0.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor material</td>
<td>Modified II Tin planted flat copper conductor</td>
<td></td>
</tr>
<tr>
<td>Conductor size</td>
<td>0.05×0.3mm</td>
<td>0.035×0.3mm</td>
</tr>
<tr>
<td>Insulation material</td>
<td>Polyester film (adhesive layer: flame retardant polyester) color: white</td>
<td>Polyester color: green</td>
</tr>
<tr>
<td>Supporting tape material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of conductors (N)</td>
<td>5 - 50</td>
<td></td>
</tr>
<tr>
<td>Insulation length (A)</td>
<td>25 - 1,000mm</td>
<td></td>
</tr>
<tr>
<td>Terminal length (B1)</td>
<td>3 - 6mm</td>
<td></td>
</tr>
<tr>
<td>Terminal length (B2)</td>
<td>2 - 4mm</td>
<td></td>
</tr>
<tr>
<td>Supporting tape length (S)</td>
<td>5 - 15mm</td>
<td></td>
</tr>
<tr>
<td>Withstand voltage*2</td>
<td>A.C.250V/1min.</td>
<td></td>
</tr>
<tr>
<td>Insulation resistance*2</td>
<td>Min.100 MΩ (D.C.250V at 20°C)</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>VW-1</td>
<td></td>
</tr>
</tbody>
</table>

*1: Depending on the conductor thickness, wrapping an insulation film around the end of the conductor to prevent disturbance is recommended.
*2: Between conductors ● Also compatible with bent parts, taped parts, and shielded parts.

Example of product description

NWFCUJ (0.5) - 10 F - 100 - 6S 4 (G) - M1 (20624)

Type
Number of conductors
Insulation length
Supporting tape length
UL style No.
Marking direction
Supporting tape color
Terminal length
CU-Joiner (FFC)

CU-Joiner 0.5mm Au plated

AFCUJ (0.5) / ASCUJ (0.5)

RoHS compliance

**Features**

- For high density wiring, minimizes dimension.
- Easy insertion to connector can reduce processing cost.
- Can be used as replacement FPC with lower cost.

**Application**

- Electronic equipment
- Flat panel display
- Automotive equipment
- Optical pick-up
- Personal computer
- GAME

- Standard UL 758
- Hitachi specifications SP23-90982

**Construction & specifications**

**Type F (supporting tape at both ends, on the same side)**

- Conductor: 0.5±0.1
- Supporting tape: 0.3±0.05

**Type G (supporting tape at both ends, on reverse side)**

- Conductor: 0.5±0.1
- Supporting tape: 0.3±0.05

**Item | AFCUJ (0.5) | ASCUJ (0.5)**

| Conductor material | Au plated flat copper conductor |
| Conductor size | 0.05×0.3mm | 0.035×0.3mm |
| Insulation material | Polyester film (adhesive layer: flame retardant polyester) color: white |
| Supporting tape material | Polyester color: blue |
| Number of conductors (N) | 5 - 50 |
| Insulation length (A) | 25 - 1,000mm |
| Terminal length (B1)(B2) | 3 - 6mm |
| Supporting tape length (S) | 5 - 15mm |
| Withstand voltage*1 | A.C.250V/1min. |
| Insulation resistance*1 | Min.100 MΩ (D.C.250V at 20°C) |
| Flammability | VW-1 |

*1: Between conductors  ●Also compatible with bent parts, taped parts, and shielded parts.

**Example of product description**

ASCUJ (0.5) - 10 F - 100 - 6S 4 (B) - M1 (20624)
CU-Joiner (FFC)

CU-Joiner 1.0mm

Features
- For high density wiring, minimizes dimension.
- Easy insertion to connector can reduce processing cost.
- Can be used as replacement FPC with lower cost.

Application
- Electronic equipment
- Printer
- Subminiature motor outlet wiring

Features
- Ratings: 2896:80°C, 30V
  20624:80°C, 60V
  20861:105°C, 60V
  20890:105°C, 90V
- Standard: UL 758
- Hitachi specifications: SP23-90980

Construction & specifications

Type F (supporting tape at both ends, on the same side)

Type H (supporting tape at one end)

Type G (supporting tape at both ends, on reverse side)

<table>
<thead>
<tr>
<th>Item</th>
<th>NWFCUJ (1.0)</th>
<th>NWSCUJ (1.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor material</td>
<td>Modified II Tin planted flat copper conductor</td>
<td></td>
</tr>
<tr>
<td>Conductor size</td>
<td>0.05×0.7mm</td>
<td>0.035×0.7mm</td>
</tr>
<tr>
<td>Insulation material</td>
<td>Polyester film (adhesive layer: flame retardant polyester) color: white</td>
<td>Polyester color: green</td>
</tr>
<tr>
<td>Supporting tape material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of conductors (N)</td>
<td>5 - 40</td>
<td></td>
</tr>
<tr>
<td>Insulation length (A)</td>
<td>25 - 1,000mm</td>
<td></td>
</tr>
<tr>
<td>Terminal length (B1)</td>
<td>3 - 6mm</td>
<td></td>
</tr>
<tr>
<td>Terminal length (B2)</td>
<td>2 - 4mm</td>
<td></td>
</tr>
<tr>
<td>Supporting tape length (S)</td>
<td>5 - 15mm</td>
<td></td>
</tr>
<tr>
<td>Withstand voltage*2</td>
<td>A.C. 500V/1min.</td>
<td></td>
</tr>
<tr>
<td>Insulation resistance*2</td>
<td>Min. 100 MΩ (D.C. 500V at 20°C)</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>VW-1</td>
<td></td>
</tr>
</tbody>
</table>

*1: Depending on the conductor thickness, wrapping an insulation film around the end of the conductor to prevent disturbance is recommended.
*2: Between conductors: Also compatible with bent parts, taped parts, and shielded parts.

Example of product description

NWFCUJ (1.0) - 10 F - 100 - 10S 5 (G) - M1 (20624)
### CU-Joiner (FFC)

**CU-Joiner 1.0mm Au plated**

AFCUJ (1.0) / ASCUJ (1.0)  
RoHS compliance

#### Features
- For high density wiring, minimizes dimension.
- Easy insertion to connector can reduce processing cost.
- Can be used as replacement FPC with lower cost.

#### Construction & specifications

**Type F (supporting tape at both ends, on the same side)**

- Conductor material: Au plated flat copper conductor
- Conductor size: 0.05x0.7mm
- Insulation material: Polyester film (adhesive layer: flame retardant polyester) color: white
- Supporting tape material: Polyester color: blue
- Number of conductors (N): 5 - 40
- Insulation length (A): 25 - 1,000mm
- Terminal length (B1)(B2): 3 - 6mm
- Supporting tape length (S): 5 - 15mm
- Withstand voltage*: A.C.500V/1min.
- Insulation resistance*: Min.100 MΩ (D.C.500V at 20°C)
- Flammability: VW-1

**Type G (supporting tape at both ends, on reverse side)**

- Conductor material: Au plated flat copper conductor
- Conductor size: 0.035x0.7mm
- Insulation material: Polyester film (adhesive layer: flame retardant polyester) color: white
- Supporting tape material: Polyester color: blue
- Number of conductors (N): 5 - 40
- Insulation length (A): 25 - 1,000mm
- Terminal length (B1)(B2): 3 - 6mm
- Supporting tape length (S): 5 - 15mm
- Withstand voltage*: A.C.500V/1min.
- Insulation resistance*: Min.100 MΩ (D.C.500V at 20°C)
- Flammability: VW-1

*1: Between conductors  ● Also compatible with bent parts, taped parts, and shielded parts.

#### Example of product description

```
AFCUJ (1.0) - 10 F - 100 - 10S 5 (B) - M1 (20624)
```

- Type
- Number of conductors
- Insulation length
- Supporting tape length
- UL style No.
- Marking direction
- Supporting tape color
- Terminal length
### Features
- For high density wiring, minimizes dimension.
- Easy insertion to connector can reduce processing cost.
- Can be used as replacement FPC with lower cost.

### Construction & specifications

#### Type F (supporting tape at both ends, on the same side)
- **Conductor material**: Modified II Tin planted flat copper conductor
- **Conductor size**: 0.1×0.8mm
- **Insulation material**: Polyester film (adhesive layer: flame retardant polyester) color: white
- **Supporting tape material**: Polyester color: green
- **Number of conductors (N)**: 5 - 40
- **Insulation length (A)**: 25 - 1,000mm
- **Terminal length (B1)**: 3 - 6mm
- **Terminal length (B2)**: 2 - 4mm
- **Supporting tape length (S)**: 5 - 15mm
- **Withstand voltage**
  - Type F: A.C.500V/1min.
  - Type H: A.C.500V/1min.
  - Type G: Min.100 MΩ (D.C.500V at 20°C)
- **Flammability**: VW-1

#### Type H (supporting tape at one end)
- **Conductor size**: 0.1×0.8mm
- **Supporting tape material**: Polyester color: green
- **Number of conductors (N)**: 5 - 40
- **Insulation length (A)**: 25 - 1,000mm
- **Terminal length (B1)**: 3 - 6mm
- **Terminal length (B2)**: 2 - 4mm
- **Supporting tape length (S)**: 5 - 15mm
- **Withstand voltage**
  - Type F: A.C.500V/1min.
  - Type H: A.C.500V/1min.
  - Type G: Min.100 MΩ (D.C.500V at 20°C)
- **Flammability**: VW-1

#### Type G (supporting tape at both ends, on reverse side)
- **Conductor size**: 0.1×0.8mm
- **Supporting tape material**: Polyester color: green
- **Number of conductors (N)**: 5 - 40
- **Insulation length (A)**: 25 - 1,000mm
- **Terminal length (B1)**: 3 - 6mm
- **Terminal length (B2)**: 2 - 4mm
- **Supporting tape length (S)**: 5 - 15mm
- **Withstand voltage**
  - Type F: A.C.500V/1min.
  - Type H: A.C.500V/1min.
  - Type G: Min.100 MΩ (D.C.500V at 20°C)
- **Flammability**: VW-1

*1: Depending on the conductor thickness, wrapping an insulation film around the end of the conductor to prevent disturbance is recommended.
*2: Between conductors: Also compatible with bent parts, taped parts, and shielded parts.

### Example of product description

**NWFHCUJ (1.25) - 10 F - 100 - 10S 6 (G) - M1 (20624)**

- **Type**: F
- **Number of conductors**: 10
- **Insulation length**: 100
- **Supporting tape length**: 10S 6 (G)
- **Terminal length**: M1
- **UL style No.**: 20624
- **Marking direction**: F
- **Supporting tape color**: G
- **Terminal length**: M1
**CU-Joiner (FFC)**

**ECO-GREEN CU-Joiner**  Whisker controlled [Modified II]

**NWEGUFCUJ/NWEGUCUJ**  RoHS compliance

---

**Features**
- Contains no "Lead", "Halogen" material.
- Flammability safety regulations applicable for UL VW-1.
- Excellent flexibility and application, parallel to that of existing FFC specifications.
- Flameproof material of adhesive is non-phosphorus type.

**Application**
- **Electronic equipment**
- **Personal computer**
- **Audio**

- Ratings: 2896:80°C, 30V 21147:80°C, 60V
- Standard UL 758
- Applicable pitch 0.5mm, 1.0mm, 1.25mm

---

**Construction & specifications (Example: 1.0mm pitch)**

**Type F (supporting tape at both ends, on the same side)**

**Type H (supporting tape at one end)**

**Type G (supporting tape at both ends, on reverse side)**

---

**Example of product description**

**NWEGUFCUJ (1.0) - 10 F - 100 - 6S 4 (G) - M1 (21147)**

- **Type**
- **Number of conductors**
- **Insulation length**
- **Supporting tape length**
- **UL style No.**
- **Marking direction**
- **Supporting tape color**
- **Terminal length**
# ECO-GREEN CU-Joiner

**AEGUCUJ** / **AEGUFCUJ**

**RoHS compliance**

## Features
- Contains no "Lead", "Halogen" material.
- Flammability safety regulations applicable for UL VW-1.
- Excellent flexibility and application, parallel to that of existing FFC specifications.
- Flameproof material of adhesive is non-phosphorus type.

## Application
- **Electronic equipment**
- **Personal computer**
- **Audio**

- ** Ratings **
  - 2896:80°C, 30V
  - 21147:80°C, 60V

- **Standard**
  - UL 758

- **Applicable pitch**
  - 0.5mm, 1.0mm, 1.25mm

## Construction & specifications (Example: 1.0mm pitch)

### Type F (supporting tape at both ends, on the same side)

- Conductor material: Au plated flat copper conductor
- Conductor size: 0.05×0.7mm
- Insulation material: Polyester film (adhesive layer: flame retardant polyester) color: white
- Supporting tape material: Polyester color: green
- Number of conductors (N): 5 - 40
- Insulation length (A): 25 - 1,000mm
- Terminal length (B1/B2): 3 - 6mm
- Supporting tape length (S): 5 - 15mm
- Withstand voltage*1: A.C.500V/1min.
- Insulation resistance*1: Min.100 MΩ (D.C.500V at 20°C)
- Flammability: VW-1

### Type G (supporting tape at both ends, on reverse side)

- Conductor material: Au plated flat copper conductor
- Conductor size: 0.035×0.7mm
- Insulation material: Polyester film (adhesive layer: flame retardant polyester) color: white
- Supporting tape material: Polyester color: green
- Number of conductors (N): 5 - 40
- Insulation length (A): 25 - 1,000mm
- Terminal length (B1/B2): 3 - 6mm
- Supporting tape length (S): 5 - 15mm
- Withstand voltage*1: A.C.500V/1min.
- Insulation resistance*1: Min.100 MΩ (D.C.500V at 20°C)
- Flammability: VW-1

*1: Between conductors

- Also compatible with bent parts, taped parts, and shielded parts.

## Example of product description

**AEGUFCUJ (1.0) - 10 F - 100 - BS 4 (B) - M1 (21147)**

- Type
- Number of conductors
- Shape
- Insulation length
- Supporting tape length
- Terminal length
- UL style No.
- Marking direction
- Supporting tape color

---

**CU-Joiner (FFC)**

**ECO-GREEN CU-Joiner**

**Au plated**

**AEGUCUJ / AEGUFCUJ**

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